Mechanical Intracranial Thrombectomy For Acute Strokes Has Worse Results At Low Volume Centers: What Are The Implications And Which Physicians Should Be Performing These Procedures

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“Volume matters”...lots of literature ...proving the obvious!!

But that is NOT the point! Results in low volume centers are good!

Time to Revascularization is the most important factor ...by far!!

And > 50% of the population Lives in rural areas or small cities

Where are all the Neurointerventionists???

Transfer to major centers takes too long

What to do? Remove the Clot... STAT!!

Most Important- Time Is Brain  
Meaning What??  
In each minute we lose:
  -1.9 million neurons,  
  -14 billion synapses (connections)  
  -12 km (7.5 miles) of nerve fibers

Subset analyses from 2015 Trials: If we reopen a major occluded artery-

Within 2 hours:
  -Recovery rate is 90%!

After 6 hours:
  -Recovery rate is 20-30%!!

Message: Intervention must be fast & local
Many more Interventionists needed... Where will they come from?

16 Million strokes per year worldwide
1200 Stroke active 24/7/365 Neurointerventionists

2 Hour Goal!

Interventional Cardiologists
Interventional Radiologists
Vascular Surgeons

We are at the Dawn of a New Era in Stroke

Overwhelming BENEFIT for INTERVENTION!!!

We will need a STEMI model for stroke
Mandated door to needle times
Emergency treatment near the onset

Infrastructure for the provision of emergent endovascular care exists in rural areas as well as major centers

1 million PCI annually in the US
Over 2,000 cardiac cath labs
Over 1500 IR and VS labs
>8,000 Interventional cardiologists
Many Interested IR & some VS

Acute stroke intervention techniques
- clot removal, angioplasty, stent placement
- Cardiologists, VS and IR are experts
Neuro Technology improving rapidly

For rural areas around the world...
A New Paradigm

"Drip and Ship" becomes
"Restore Flow (Revascularize) and thenShip"”
to a major Neuro Center if Necessary!

For larger cities...
Go direct to a CSC!
EMS must go direct to major stroke centers

This a Public Health Emergency

Anyone interested and willing to learn
should be allowed to help

What is needed?

- Training can not be prescriptive or turf restricted and should vary depending on background and skill set
- Training can be based on Simulation, 3-D flow models and observation in a CSC
- Basic CV anatomy, vessel fragility and access skills -GAS experience helpful
- Create a stroke team...Collaboration is key